

## Section I (Amendments to the Claims)

Please amend claims 1, 5, 7 and 8 as set out in the following listing of the claims of the application.

1. (Currently amended) A method of diagnosing Alzheimer's disease or an early stage of or a predisposition for this disease by means of a patient sample and one or more mitogenically stimulated surface markers, the method comprising the steps of:
  - (a) mitogenic stimulation obtaining a patient sample of the comprising peripherally accessible cells in the sample;
  - (b) quantification of the mitogenically stimulated cells within the cell population comprising the one or more surface markers for mitogenic stimulation;
  - (c) mitogenic stimulation of the cell population;
  - (d) quantification of the cells within the mitogenically stimulated cell population comprising the one or more surface markers before and after step (a) by means of one or more surface markers expressed after mitogenic stimulation, the cells bearing the surface markers being separated by the cells bearing no surface markers by means of antibodies directed against the surface markers;
  - (ee) determination calculation of the a stimulation index as the a relationship quotient of the number of calls bearing comprising the one or more surface marker or markers before in step (b) and or after step (ad) and;
  - (f) detecting that the sample is from a patient suffering from Alzheimer's disease or an early stage of or a predisposition for this disease if the stimulation index calculated in step (e) is which reaches  
at least 10 times, with as a maximum of 100 times, the unstimulated control sample, being a sign of an Alzheimer's disease or an early stage of or a predisposition for this disease.
2. (Original) The method according to claim 1, wherein the sample is a blood sample and the cells are lymphocytes.
3. (Previously presented) The method according to claim 1, wherein the surface marker is CD69.

4. (Original) The method according to claim 3, wherein the CD69<sup>+</sup> cells are further specified with respect to CD4<sup>+</sup> and/or CD8<sup>+</sup> subpopulations.

5. (Currently Amended) The method according to claim ~~4~~<sup>2</sup>, wherein the blood is stabilized by adding one or more anticoagulative compounds to the patient sample before step (ba).

6. (Previously presented) The method according to claim 1, wherein the cells are stimulated by PHA, protein A or PWM.

7. (Currently amended) The method according to claim 1, wherein the antibodies in step (bd) are bound to magnetic particles and the separation is carried out via immunomagnetic separation.

8. (Currently Amended) The method according to claim 1, wherein the stimulation index is determined by determining the protein content and/or nucleic acid content of the cells bearing surface markers ~~before and after step (a) in step (b) and step (d)~~.

9. (Withdrawn) A kit for the diagnosis of Alzheimer's disease or an early stage of or a predisposition for this disease, the kit containing the following constituents:

- (a) a compound for mitogenic stimulation; and
- (b) at least one antibody directed against a surface marker expressed after mitogenic stimulation.

10. (Withdrawn) The kit according to claim 9, also containing:

- (a) an anticoagulative compound; and/or
- (b) a buffer for cell lysis.

11. (Withdrawn) The kit according to claim 9, wherein the antibody is an antibody bound to a magnetic particle.

12. (Withdrawn) The kit according to claim 9, wherein the antibody is an anti-CD69 antibody.

13. (Currently Amended) The kit according to claim 9, which also contains an anti-CD4 and/or CD8 antibody.